

Abstract of the Disclosure

A wavelet-based image compression system and method are presented. Compression is accomplished by performing a wavelet transformation of an input digital image. The resulting wavelet coefficients are compared to a threshold value. Coefficients falling below the threshold are discarded. The remaining coefficients are quantized. The quantized coefficients are then compressed using an entropy encoding technique, such as arithmetic, run length, or Huffman encoding, or a combination of Huffman and run length encoding. The wavelet transform can be an integer wavelet transform derived using a lifting scheme or correction method, while the quantization scheme can be sub-band oriented.

5 Input color image pixels can be reduced using a color table. In addition, color pixels can be transformed between color spaces prior to wavelet transformation.

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